

APPENDIX E: OIL AND GAS LEASING PROGRAM IMPACT SUMMARY

Proposed Action

The following summary presents the impacts considered most significant within each environmental component as a result of the Resource Area's oil and gas leasing program (proposed action) as summarized in the Management Guidance Common to All Alternatives section in Chapter 2 of this RMP. The reader may refer to the environmental impact assessment in Chapter 2 of the Miles City District Oil and Gas EA for a detailed analysis. That document is on file at the Miles City District Office. That EA identifies, in a generic way, impacts associated with preliminary exploration, exploratory drilling, development production and abandonment. Then geographic areas are identified according to their sensitivity to these phases. Mitigation is then suggested. In most cases impacts are completely mitigated. See Appendix D and F for mitigation discussions.

Geology

Impacts could occur on paleontological features within the study area resulting from the full range of surface disturbing actions associated with oil and gas activities.

Soils

Impacts would result in certain areas depending upon slope, rainfall, inherent soil characteristics, and vegetative cover. Soil productivity would be lessened from compaction, use of inferior fill material and spillage of fuel, drilling fluids, and crude oil.

Topography

No significant impacts are expected.

Vegetation

Impacts would result from the direct destruction of plant cover from all phases of oil and gas activities. The area-specific magnitude of impacts depends upon slope, climatic conditions, soils, and vegetative types involved.

Water

Possible impacts to the hydrologic features include increased sediment yield and reduced water output and quality from wells and springs. Downstream contamination is possible in certain areas, particularly on or near floodplains if an oil spill occurs.

Wildlife

Road construction and pad construction, resulting in habitat and forage loss and increased levels of human activity during all phases of oil and gas work would impact animals. Human intrusions into critical winter range or breeding areas during high use periods can have serious impacts on certain species.

Recreation

Only minor direct impacts are expected.

Prehistoric and Historic Features

Major impacts to cultural features could include loss of spatial association of artifacts and the destruction of the artifacts themselves, particularly in areas of known high site density.

Economic and Social Conditions

Economic and social impacts would center around population growth in communities which do not have excess housing and service

(schools, sewage treatment, water supply, etc.) capacity. Peak impacts would occur during the labor intensive development phase.

Land Use

Land use impacts would involve conflicting land uses near communities which could experience expansion as a result of oil and gas activity and reductions in forage and agricultural production.